CASE REPORTS

A CASE OF ALVEOLAR CARCINOMA WITH METASTASES IN BRAIN AND ADRENAL GLAND

By ROBERT MARSHALL, M.D., F.R.C.P.I.,
from the Royal Victoria Hospital, Belfast.

R. N., aged 38, a coal-carter, was admitted to Ward 6 of the Royal Victoria Hospital, Belfast, on 11th April, 1936. His family history was good. He stated that he had no serious illness, that he had served in the Army during the Great War, and that he had been in his present employment for several years. On the morning of 29th February, 1936, he said, he fell when handling a sack of coal, and struck his left elbow on the ground; his forearm "tingled right down to the fingers," but he was able to continue his work. Some hours later he was having a meal in his own home when his wife said to him, "What are you doing with your left hand?" He looked down and saw that he was twitching or moving his left hand, but had not been aware of it. Soon afterwards he consulted his doctor, who advised him to go to hospital.

He attended at Doctor Lewis's out-patient department, and was shortly afterwards admitted to Ward 6.

In appearance he was a slim, dark-haired man who looked younger than stated age; he had a rather sallow, bronzed skin. He exhibited a continuously repeated, involuntary, purposeful movement of the left upper limb, involving arm, forearm, and hand, occurring about every fifteen seconds, but varying in time and intensity. Briefly, he appeared to be continuously striking his own upper abdomen. These blows were so forceful that soon the Ward Sister had to pad his abdomen with gamgee tissue to protect it. He also lurched about in the bed, trying, as he said, to stop these movements. He volunteered the information that he could throw a fit if he breathed very deeply, and proceeded to demonstrate this; after eleven deep breaths his left arm went into clonic contractions, his head and eyes turned towards the right, his face became cyanosed and his neck rigid. The "fit" lasted about thirty seconds, after which the left arm was apparently paralysed of movement, but the reflexes could be easily elicited. After two minutes the tic-like movements of left arm and hand began again, gradually increasing in intensity until the usual height was attained. Consciousness was maintained throughout. He was not encouraged to repeat this performance.

At this stage his pulse and temperature were normal. His appetite was very variable; for some days he could not be coaxed to take food, and then for a day or so he would eat quite hungrily. Physical examination revealed little or nothing: his heart, lungs, and abdomen showed nothing abnormal. His blood-pressure was 135/80. Examination of C.N.S. was equally indefinite: there was no papillœdema, but the outer halves of the optic discs were thought to be a

little pale; there was a slight adhesion of the iris of the right eye, but otherwise the pupils were normal; there was a rather doubtful coarse nystagmus to the right side.

The other cranial nerves were normal. There was slight weakness of the left hand-grip as exerted. Sensory and reflex functions were normal. X-ray of skull showed no abnormality. The C.S.F. was normal. The Wasserman reaction was negative. All these findings were strongly suggestive of "functional" condition, but two points puzzled us: first, I gave a general anæsthetic (C.E.) myself, and even when deeply anæsthetized his coarse tremor never entirely disappeared from his left hand; secondly, my house-physician, Dr. Topping, reported that his tremor persisted during natural sleep.

His general condition gradually deteriorated, and the spasmodic movement spread to the left leg and to the left side of the face, giving rise to a grotesque winking movement.

He did not improve with any sort of treatment, and his skin became noticeably more bronzed and he lost several pounds in weight. On 6th June his temperature rose to 103°F.; he died, apparently of a terminal pneumonia, on 8th June.

At post-mortem, Professor Young found a tumour, spherical in shape and about one inch in diameter, in the subcortical zone of the parietal region of the right cerebral hemisphere, and presenting foci of necrosis and hæmorrhage; a large tumour was also found which had apparently completely destroyed the left adrenal gland. These findings made the pathologist examine the bronchi and lungs with particular care: the appearances were, macroscopically, those of a terminal pneumonia involving the upper lobe of the right and the lower lobe of the left lung. The lungs, therefore, were not completely preserved, but subsequent microscopical examination of the tissue kept for this purpose showed that while the consolidation of the left lung was due to pneumonia, that of the right lung was due to the presence of the typical cells of alveolar carcinoma, and the tumours of brain and adrenal gland were metastases of this.

Photographs of these metastases, and micro-photographs of the consolidated areas of both lungs, appear in the centre inset of the Journal.

The case is an excellent example of "functional" phenomena superimposed on an "organic" base, like the elaborate superstructure of icing on the solidity of a bride's-cake, and of the difficulty of determining what is the nature of the cake underneath the icing.

The medico-legal aspect of the case is not without interest. The widow of the deceased applied to the Court for compensation under the Workmen's Compensation Act, on the grounds that the accident of 29th February, 1936, had led to his death. The employers filed an answer repudiating liability, and supported this by medical certificates from Professor Young and myself. On the day the case was to come before His Honour the Recorder of Belfast negotiations were commenced, and resulted in the claims being settled for fifty pounds, without an admission of liability, the employers paying a proportion of the costs incurred. These terms of settlement were approved by His Honour the Recorder.

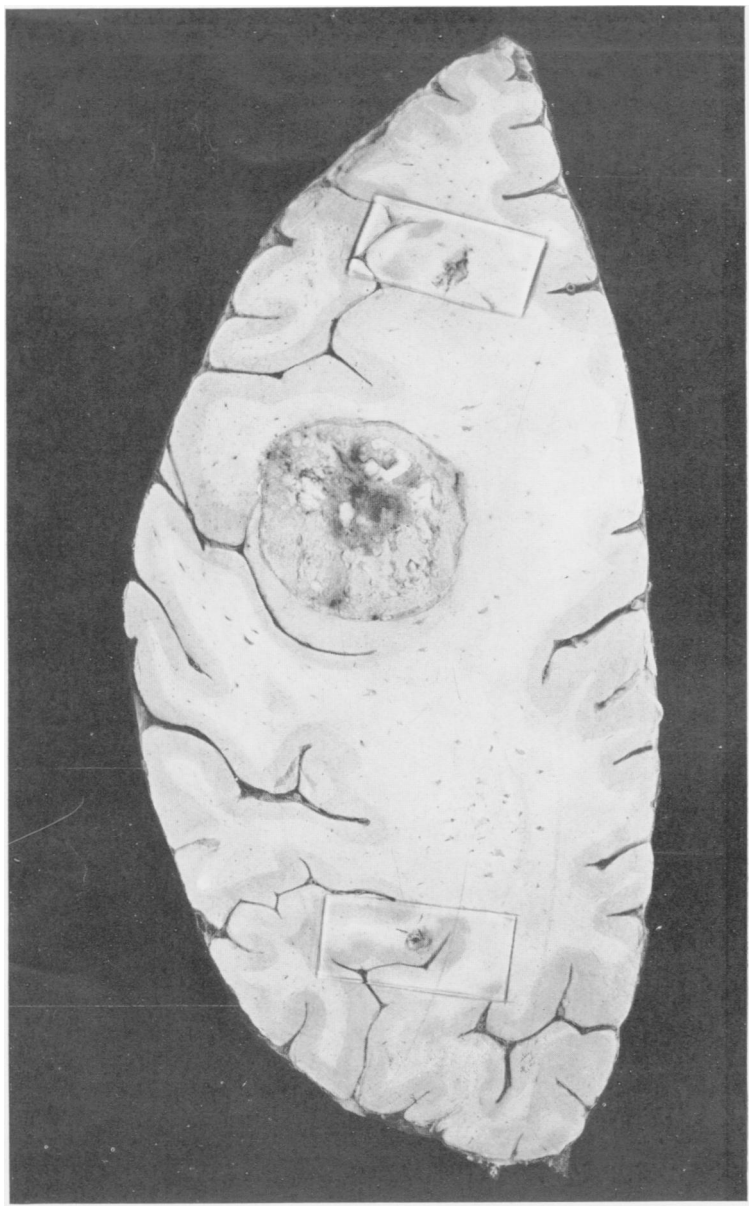


PHOTO BY MR. A. M'C. A. MAHAFFY

Cerebral Metastasis of Alveolar Carcinoma

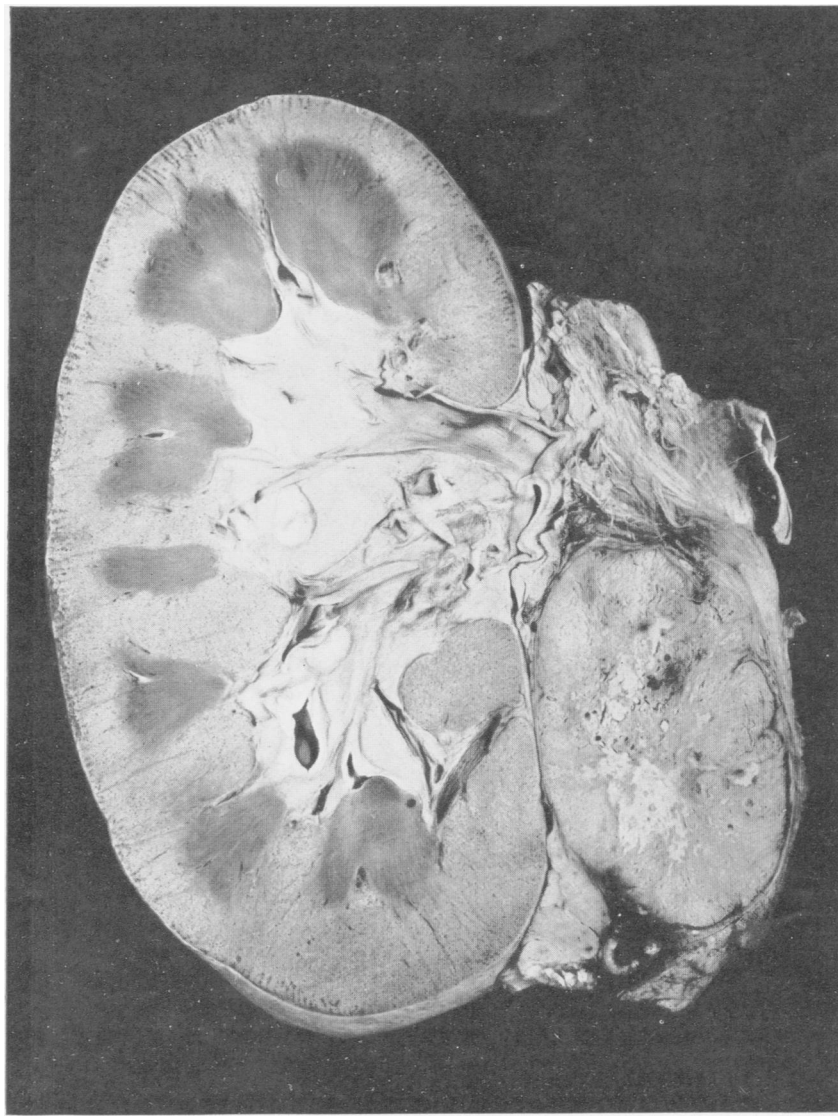
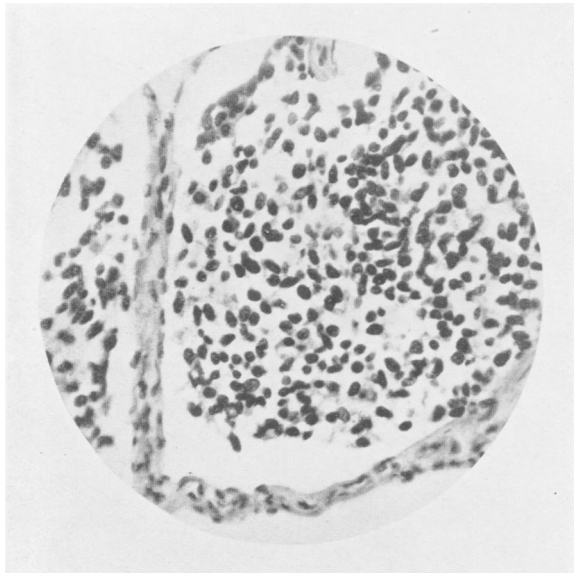
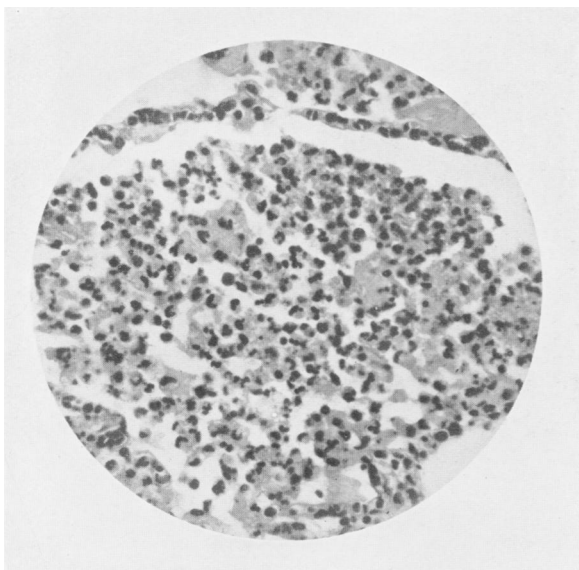


PHOTO BY MR. A. M'C. A. MAHAFFY

Adrenal Metastasis of Alveolar Carcinoma



Right Lung, Upper Lobe. Alveolar Cell Carcinoma



MICROPHOTOS BY MR. A. M'C. A. MAHAFFY

Left Lung, Lower Lobe. Pneumonic Consolidation